

Hawaii Volcanoes National Park
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**Internship report of my volunteer job on the Hawaii Volcanoes
National Park on the Big island of Hawaii (April/may 2007)**

My name is Aurelien Humm, I am a french student in a Landscapes design school in France called ENSNP.

My school offer us to do some internships abroad in order to do practical activities in a plant domain and in the same time, try to improve our english level!

I was very exited about finding an internship in an american national park since the experience I had, visiting them with my families some years ago.

Finding one used to be not so obvious but finally, Sierra Mcdaniel from the HAVO answered me positively and I knew that I would work for the Hawaii volcanoes NP!

I had already done an internship in a national park in New zealand few years ago but my experience in Hawaii was completely different: Actually, I have discovered and worked there in all the differents stages that the Vegetation Service do in the park. We moved all the time, did differents activities in differents places, never did the same thing for weeks and weeks as I did elsewhere...in two word: always exciting!

The Job that the Vegetation Service attempts to do is remove as maximum as possible aliens plants spreaded in the park to let natives grow back instead.

At that time, two differents areas in the park are especially concerned by that work, one is located at the end of Hilina Pali road and the other one on slopes of the Huge volcano Mauna Loa.

The job that the park try to do there is made of differents steps: collecting seeds, made them growing up on the nursery, outplanting and finally control the survivors rates and natural evolution after by monitorings.

The first stage in the chronological order was to collect seeds:

We collected seeds in two different ways, sometimes by chance (while we founded one interesting/rare tree full of fruits) or during special «collecting seeds day».

Sometimes, we used to go in special areas to collect specific seeds according to the need we had of them at that time, even if it was quite a long way to go there.

All these seeds that we collected were listed, referenced and stored as soon we went back to the office. It is important to notice that to avoid to mix different subspecies themselves, we always referenced the specific place where we founded seeds of one species and never blended seeds of the same species picked in different places.

The aim of that first stage of the Vegetation program is to provide seeds for planting them after in the nursery during the second stage of the work.



Santalum paniculatum



Melicope radiata



Pittosporum terminalioides

After proceeding seeds (remove the flesh around the seed or only let them finish their maturation), **the second step, we planted them into trails.**

After few months, when plants grow up, we transplanted them into bigger pots.

Sometimes, the easiest and/or quickest way to make plants growing up was to collect directly feet in the nature and transplant them into pots.

Heteropogon contortus will be picked in the nature to be transplanted



Then I had the opportunities to transplant many different plants, all natives obviously, from the *Acacia koa* to the *Coprosma rhyncocarpa* without forget some *Sophora chrysophylla* or *Pittosporum terminalioides*. It was quite exciting to see all these plants growing there before being planting in the next months.

The third step was the outplanting. I have done it only twice because I arrived unfortunately at the end of the planting period but despite of it, I still have seen what was the purpose of that job.

There are two areas where the park especially works to reintroduce natives plants.

- The first one, on Mauna loa slopes consists in a dry mesic forest at 4000 feet elevation. It used to be a ranch without nothing else than old trees and grasses. Since that time, the park tried to make first a dense canopy cover on that place to make shade underneath. Then, as the canopy begin to be more and more dense, we can plant in that shade some shrubs in order to built a native understory. It seems to be an efficient and unpolluting way to remove invasives plants.

- The second area we worked on was located in the end of the Hilina Pali road, on the south of the park, not so far from the coast, in a dry and quite hot area. This is a part of a program for restore native vegetation in a fire damaged area which is now totally invaded by aliens grasses.

It was very exciting to work in that great landscape with the view on the coast 2500feet under! We planted following a mapgrid the service established. Some of the outplanting spots were monitoring one which means that they will be checked in the future to watch for the survivors rates and let people of the crew decide if that method is good or not to remove grasses on that area.



Planting in Hilina Pali....



That used to be a very interesting thing for me to discover which plants were used, according to the dramatically different climatic conditions and the different ecological goals in these two places.

Finally, I spend a great time to do monitoring in the Mauna loa slopes in places which have been planted five years ago to see the state of evolution of these plants and see changes that occurred in the general aspect of the forest.

We had control plots and planted plots to check, so it let us the opportunity to see what it happens when we plant and what happened when we do nothing... amazing!

Where nothing has been done five years ago, it is a grass understory with *Acacia koa* as lonesome tree, whereas the plot which used to be planted begun to be dense and diversified according to the number of different plants we founded there.



Doing a transect...

Then I have done so many things that it is difficult to explain all of them with as details as I would have wanted but I would remind that internship as a very interesting internship for my future professional life.

I realized that nothing was sure about nature and its evolution in the time: a good way of work in such case is also to try many different maners of proceeding to avoid mistakes and above all, never affirm one unique truth...

Moreover, I strongly appreciated the really good work's ambiance I felt with Susan, Corie, Sierra and Volunteers I worked with.

It was a reallly great pleasure to work with these people who know so well the environnement they work in and its specificities, and were always receptive to my questions and needs.

Thanks to all of them and to NPS which offered that opportunitie I will never forget!

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